

Serial No.: 10/609,190
Art Unit: 2879**REMARKS****Finality of Office Action**

In response to the Final Office Action, Applicant respectfully requests that the Examiner enter the foregoing amendments and consider the following remarks because the claims have been placed in condition for allowance. In the alternative, Applicant requests that the claims amendments be entered because they better place the claims in condition for an appeal.

Claim Rejections under 35 U.S.C. § 102

- (a) Claim 29 is rejected under 35 U.S.C. 102(e) as being allegedly being anticipated by U.S. Patent 6,825,056 to Asakawa *et al.*

Specifically the Office Action states:

Regarding claim 29 Asakawa discloses (Fig. 9 column 6 lines 19-22, column 28 lines 64-67, Table 11 column 29 lines 10-12) a semiconductor light emitting device comprising a UV-laser diode, a phosphor composition positioned to receive light emitted from the laser diode, absorbing the light and emitting a light at a longer wavelength (white light) wherein the phosphor composition comprises a first type of phosphor (Y₂O₂S: Eu) emitting red light and second type of phosphor comprising ZnS: Cu, Al emitting green light upon excitation.

Office Action at 3. Applicants respectfully traverse. Claim 29 as amended herein recites in part "wherein the phosphor composition is composed of a first type of phosphor particles and a second type of phosphor particles." This feature is not taught or suggested by *Asakawa*. Instead, *Asakawa* discloses "mounting a fluorescent substance on a UV-LED" (col. 28, lines 64-65, emphasis added), where the fluorescent substance used is the three fluorescent substances listed in col. 29, Table 11. Therefore, as amended, *Asakawa* does not teach or suggest independent claim 29.

- (b) Claim 30 is rejected under 35 U.S.C. 102(e) as allegedly being anticipated by U.S. Patent 6,576,488 to Collins *et al.* Applicants respectfully traverse. Claim 30 has been amended to depend from claim 29, which is allowable for at least the reasons cited above. Therefore, Applicants respectfully request that the rejection be withdrawn.

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(c) Claim 31 is rejected under 35 U.S.C. 102(a) as allegedly being anticipated by WO 03/005458 to Brunner et al. (U.S. Patent Application Publication 2004/0188697 to Brunner et al.). Applicants respectfully traverse. Claim 31 has been amended to depend from claim 29, which is allowable for at least the reasons cited above. Therefore, Applicants respectfully request that the rejection be withdrawn.

Claim Rejections under 35 § 103

(a) Claims 1, 2, 4, 6-11, 15-17, 19-23, and 25 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent 6,252,254 to Soules et al. and further in view of U.S. Patent 6,391,504 to Tai et al.

The Office Action specifically states:

Regarding claim 1 Soules discloses (column 2 lines 1-32) a light emitting device comprising a laser diode and a phosphor composition positioned to receive light (blue light) from the laser diode and capable of absorbing the light and emitting light at a wavelength longer than that (blue) emitted from the laser diode. Soules further discloses (column 4 lines 10-24) the phosphor composition comprising first type of phosphor particles emitting red light and second type of phosphor particles emitting green light upon excitation from the blue-emitting LED.

Regarding claim 1 Soules does not exemplify first type of phosphor emitting red light comprising a material selected from CaS:Eu^{2+} , Mn^{2+} , $(\text{Zn,Cd})\text{S:Ag}^+$, $\text{Mg}_4\text{GeO}_5\text{:F:Mn}^{2+}$ and ZnS:Mn^{2+} .

Tai in relevant art of phosphors for field emission display panel discloses (column 5 lines 33-37) phosphor which emits red light is $(\text{Zn,Cd})\text{S:Ag}$

The selection of known material for a known purpose is generally considered to be within the skill of the art. It would have been obvious to use $(\text{Zn}_8\text{Cd})\text{S:Ag}^+$ for red emitting phosphor as suggested by Tai et al. in the phosphor composition of Soules because the selection of known material for known purpose is within the skill of the art.

Office Action at 4-6. Applicants respectfully traverse. The references are not properly combinable.

When the Board of Patent Appeals and Interferences rejected a need for any specific hint or suggestion in the art to combine references, this was held to be legal error. See *In re Lee*, 277 F.3d 1338 (Fed. Cir. 2002). The court held that the Office "cannot rely on conclusory statements when dealing with particular combinations of prior art and specific

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claims, but must set forth the rationale on which it relies." *Id.* at 1345. Further, the court stated that the specific teaching that would have suggested the claimed combination must be present and subjective belief could not be relied on. *Id.* In the present case, one of ordinary skill in the art would have no motivation to combine *Soules* with *Tai*. First, *Soules* is directed to a white light emitting device with a phosphor composition. *Tai* however, is directed to a field emission display panel. As noted in *Tai*, "a field emission display panel...enables multi-color display...." Col. 1, lines 2-4. Second, *Tai* uses its phosphor composition to create and pattern and then removes the phosphor composition (see col. 2, lines 31-36). There is no motivation to combine the two references, since the phosphor compositions are used for two different purposes. One looking for solutions in the light emitting diode art of *Soules* would not be motivated to look in the field emission display panel art of *Tai*.

Nevertheless, to advance prosecution and facilitate allowance of the claims, claim 1 has been amended to recite only first type of phosphor particles that are not disclosed or suggested by *Tai*. Thus, all of the features of claim 1 are not taught or suggested by the claimed composition. Because claims 2, 4, 6-11, 15-17, 19-23, and 25 depend directly or indirectly from claim 1, these claims are also allowable for at least the same reasons. Applicants therefore respectfully request that the rejection of claims 1, 2, 4, 6-11, 15-17, 19-23, and 25 be withdrawn.

(b) Claims 1, 2, 14, and 25 - 27 are rejected under 35 U.S.C. 103(a) as allegedly being anticipated by U.S. Patent 6,294,800 to Duggal et al. and further in view of U.S. Patent 6,391,504 to Tai et al.

The Office Action specifically states:

Regarding claim 1 Duggal discloses (column 3 lines 45-62, column 4 lines 54-67) a lamp comprising laser diode and a phosphor composition positioned to receive ultraviolet light (254 nm) emitted from the laser diode and absorbing the light and converting the light into a longer wavelength in visible range. Duggal further discloses (column 7 lines 32-45) the phosphor composition comprises first type of particles emitting red light and second type of particles emitting green light upon excitation.

Regarding claim 1 Duggal does not exemplify first type of phosphor comprising a material selected from CaS: Eu^{2+} , Mn^{2+} , $(\text{Zn,Cd})\text{S: Ag}^+$, $\text{Mg}_4\text{GeO}_5.5\text{F: Mn}^{2+}$ and ZnS: Mn^{2+} .

Tai in relevant art of phosphors for field emission display panel discloses (column 5 lines 33-37) phosphor which emits red light is $(\text{Zn,Cd})\text{S: Ag}$.

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The selection of known material for a known purpose is generally considered to be within the skill of the art. It would have been obvious to use (Zn,Cd)S:Ag⁺ for red emitting phosphor as suggested by Tai et al. in the phosphor composition of Duggal because the selection of known material for known purpose is within the skill of the art.

Office Action at 7. Applicants respectfully traverses. The references are not properly combinable.

In the present case, one of ordinary skill in the art would have no motivation to combine *Duggal* with *Tai*. First, *Duggal* is directed to a white light emitting diodes with a phosphor composition. *Tai* however, is directed to a field emission display panel. As noted in *Tai*, "a field emission display panel...enables multi-color display...." Col. 1, lines 2-4. Second, *Tai* uses its phosphor composition to create a pattern and then removes the phosphor composition (see col. 2, lines 31-36). There is no motivation to combine the two references, since the phosphor compositions are used for two different purposes. One looking for solutions in the light emitting diode art of *Duggal* would not be motivated to look in the field emission display panel art of *Tai*.

Nevertheless, to advance prosecution and facilitate allowance of the claims, claim 1 has been amended to recite only first type of phosphor particles that are not disclosed or suggested by *Tai*. Thus, all of the features of claim 1 are not taught or suggested by the claimed composition. Because claims 2, 14, and 25 - 27 depend directly or indirectly from claim 1, these claims are also allowable for at least the same reasons.

Applicants therefore respectfully request that the rejection of claims 1, 2, 14, and 25 - 27 be withdrawn.

(c) Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent 6,252,254 to Soules and U.S. Patent 6,391,504 to Tai et al. and further in view U.S. Patent 6,576,488 to Collins et al. Applicants respectfully traverse. Because claims 12 and 13 depend directly or indirectly from claim 1, these claims are also allowable for at least the same reasons as those cited above with respect to claim 1.

Applicants therefore respectfully request that the rejection of claims 12 and 13 be withdrawn.

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(d) Claim 18 is rejected under 35 U.S.C 103(a) as allegedly being unpatentable over U.S. Patent 6,252,254 to Soules and U.S. Patent 6,391,504 to Tai et al. and further in view of U.S. Patent 6,654,079 to Bechtel et al. Applicants respectfully traverse. Because claim 18 depends from claim 1, claim 18 is also allowable for at least the same reasons as those cited above with respect to claim 1.

Applicants therefore respectfully request that the rejection of claims 18 be withdrawn.

(e) Claim 24 is rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent 6,252,254 to Soules, U.S. Patent 6,391,504 to Tai et al. and further in view of *Brunner et al.* Applicants respectfully traverse. Because claim 24 depends from claim 1, claim 24 is also allowable for at least the same reasons as those cited above with respect to claim 1. Applicants therefore respectfully request that the rejection of claims 24 be withdrawn.

(f) Claim 28 is rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent 6,252,254 to Soules and U. S. Patent 6,391 to Tai et al. and further in view of U.S. Patent 6,490,309 to Okazaki et al. Applicants respectfully traverse. Because claim 28 depends from claim 1, claim 28 is also allowable for at least the same reasons as those cited above with respect to claim 1.

Applicants therefore respectfully request that the rejection of claims 28 be withdrawn.

Newly Added Claim

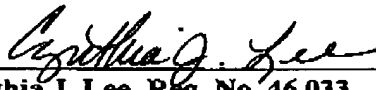
Claim 32 has been newly added to further define and/or clarify the scope of the invention. Claim 32 is allowable for at least the reasons as those cited above with respect to claim 1.

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CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-2, 4, and 6-32 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephone conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,


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